

L Number	Hits	Search Text	DB	Time stamp
1	34429	(insulative or insulating or insulator or dielectric) with (polymer or organic)	USPAT; US-PGPUB	2003/11/13 11:12
2	968	((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)	USPAT; US-PGPUB	2003/11/13 11:13
3	1	((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and (aerosol with heating)	USPAT; US-PGPUB	2003/11/13 11:10
4	2	((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and (aerosol same heating)	USPAT; US-PGPUB	2003/11/13 11:12
5	611	((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating	USPAT; US-PGPUB	2003/11/13 11:13
6	12	(((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating) and aerosol	USPAT; US-PGPUB	2003/11/13 11:13
7	5	(((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating) and aerosol) and @ad<20010420	USPAT; US-PGPUB	2003/11/13 11:11
8	4	(((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating) and aerosol) and @ad<20010420) not (((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and (aerosol same heating))	USPAT; US-PGPUB	2003/11/13 11:11
9	2	((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and (aerosol same heating)	USPAT; US-PGPUB	2003/11/13 11:12
10	24769	(insulative or insulating or insulator or dielectric) with (polymer or organic)	EPO; JPO; DERWENT; IBM_TDB	2003/11/13 11:13
11	1004	((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)	EPO; JPO; DERWENT; IBM_TDB	2003/11/13 11:13
12	64	((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating	EPO; JPO; DERWENT; IBM_TDB	2003/11/13 11:13
13	2	(((((insulative or insulating or insulator or dielectric) with (polymer or organic)) same (monomer or oligomer)) and heating) and aerosol	EPO; JPO; DERWENT; IBM_TDB	2003/11/13 11:13

US-PAT-NO: 6387453

DOCUMENT-IDENTIFIER: US 6387453 B1

TITLE: Method for making  
surfactant-templated thin films

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Brief Summary Text - BSTX (7):

According to the present invention, an evaporation-induced self-assembly method is provided to prepare a porous, hybrid surfactant-templated, thin film by mixing a silica sol precursor, a solvent, a surfactant, and an interstitial compound to first form a silica sol, evaporating a portion of the solvent to form a liquid crystalline thin film mesophase and heating the liquid crystalline mesophase to remove surfactant. Because the surfactant is at a concentration less than the critical micelle concentration, evaporation of a portion of the solvent, such as can occur during coating onto a substrate or during aerosol processing or spray drying, forms a liquid-phase crystalline mesophase material. Coating onto a substrate by spin-coating, dip-coating and spray-coating forms a thin film wherein the thin film can be either ordered or disordered. Processing by aerosol processing or spray drying permits formation of structured particles.

Detailed Description Text - DETX (18):

In another embodiment, the interstitial compound can be a hydrophobic organic polymer, oligomer, or swelling agent that swells the liquid crystalline mesoporous material and thereby increases the porosity of the formed thin film.

Materials prepared with hydrophobic organic polymers were prepared with a resulting dielectric constant less than 2, showing potential use for applications requiring low-dielectric constant materials.